



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/673,551	09/30/2003	Edward J. Cavenagh	83378-702 ADB	6470

23529 7590 07/12/2006

ADE & COMPANY INC.
P.O. BOX 28006 1795 HENDERSON HIGHWAY
WINNIPEG, MB R2G1P0
CANADA

EXAMINER

PIZIALI, ANDREW T

ART UNIT	PAPER NUMBER
----------	--------------

1771

DATE MAILED: 07/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/673,551

Applicant(s)

CAVENAGH, EDWARD J.

Examiner

Andrew T. Piziali

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12, 14, 16, 17 and 19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 16, 17 and 19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/18/2006 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino.

Regarding claims 1 and 3-12, Bradley discloses a support column comprising a form for receiving and containing a settable filler material while the material sets comprising: a tubular wall formed of a flexible woven polymer fabric having a first annular end edge at a first end and a second annular end edge at a second end; at least one filler opening into the form for receiving the filler material; wherein the tubular wall is formed from a strip of the fabric which is arranged helically such that one side edge of the strip is stitched to an opposed side edge of a next turn of the strip to define a stitched seam which extends helically of the tubular wall from one end panel

Art Unit: 1771

to the opposite end panel (see entire document including column 3, lines 16-54, column 6, lines 1-10, column 10, lines 14-26 and Figures 5, 6, 10 and 12).

Bradley discloses that the ends may be sewn (column 4, lines 20-25), but Bradley does not appear to mention forming the end panels as circular end panels stitched around the circular peripheral edge to a respective one of the first and second end edges of the tubular wall. Natrass and Marino each discloses that it is known in the flexible bulk bag art to form end panels by stitching separate end panels around the peripheral edge to a respective one of the first and second end edges of the bag wall (see entire documents including column 4, lines 25-34 and column 5, lines 1-9 of Natrass and column 3, lines 4-17 of Marino). Natrass even discloses that it is known in the flexible bulk bag art to use the disclosed end panels to replace, or in combination with, the end panel construction disclosed Bradley (see column 5, lines 1-9 of Natrass). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the end panels from any suitable end panel construction, such as the disclosed end panels of Natrass or Marino, with or without the end panel construction disclosed by Bradley, because the end panels would provide the bag with sufficient strength to carry bulk materials and because it is within the general skill of a worker in the art to select a known end panel construction on the basis of its suitability and desired characteristics such as strength.

Regarding the form being mounted with one end panel uppermost at a surface to be supported and with the opposite end panel resting on a floor surface, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including

Art Unit: 1771

Figures 2 and 3 of Nattrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

It is noted that the recitation of intended use (column located between an uppermost surface and a floor surface) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Considering that the applied prior art teaches a support column with straps capable of allowing the form to be mounted with one end panel uppermost at a surface to be supported while the opposite end panel resting on a floor surface, the applied prior art teaches the claimed structural limitations.

Regarding the form containing a heated settable filler material which is set, Bradley discloses that the column may contain soil or other fill material (column 1, lines 7-25). Soil is considered a settable filler material because it can be put in a specified position. Although Bradley does not specifically mention heating the filler material before letting it set, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966

Art Unit: 1771

(Fed. Cir. 1985). The burden has been shifted to the applicant to show obvious difference between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289 (Fed. Cir. 1983). The applied prior art either anticipated or strongly suggested the claimed subject matter. It is noted that if the applicant intends to rely on Examples in the specification or in a submitted declaration to show non-obviousness, the applicant should clearly state how the Examples of the present invention are commensurate in scope with the claims and how the Comparative Examples are commensurate in scope with the applied prior art.

Regarding claim 3, Bradley discloses that the fabric strip may extend in at least one turn of helix (Figure 6).

Regarding claims 4 and 7, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 5, the strip of Bradley appears to lie at an angle of the order of 45 degrees relative to a line transverse to the longitudinal to the axis of the tubular member (see Figures 5-7, 10, 12 and/or 15).

Regarding claims 6 and 7, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and

Art Unit: 1771

column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Regarding claim 8, Bradley discloses that the tubular wall and end panels may each consist of a single layer of fabric (column 3, lines 42-54).

Regarding claim 9, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

Regarding claim 10, Bradley discloses that the tubular wall and the end panels may be stitched together with simple overlapping seams (column 3, lines 28-33).

Regarding claim 11, Bradley discloses that the flexible fabric may be polypropylene woven fabric (column 6, lines 1-11).

Regarding claim 12, Bradley discloses that the flexible woven fabric may be substantially imperforate (column 3, lines 20-22).

4. Claims 2, 14, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino as applied to claims 1 and 3-12 above, and further in view of any one USPN 6,171,533 to Adams et al. (hereinafter referred to as Adams) or USPN 6,139,482 to Lafleur.

Regarding claims 2, 14, 16-17 and 19, Bradley discloses that the fabric may be a single layer of fabric, which may have an inner liner (column 3, lines 42-62 and column 10, lines 43-56), but Bradley does not appear to specifically mention a metal foil layer in combination with

Art Unit: 1771

the woven polymer layer. Adams and Lafleur each discloses that it is known in the bulk bag art to use a metal foil layer in combination with a woven polymer layer to form a liquid tight barrier (see column 2, lines 28-37 and column 5, lines 8-13 of Adams and column 1, lines 10-40 of Lafleur). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wall and end panels from any suitable material, such as a woven polymer fabric laminated with a metal foil, because the bag would not be susceptible to water damage and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 16, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 17, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Art Unit: 1771

Regarding claim 19, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

5. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of USPN 5,232,429 to Cizek in view of any one of USPN 4,610,028 to Nattrass or USPN 4,874,258 to Marino.

Regarding claims 1 and 3-12, Bradley discloses a support column comprising a form for receiving and containing a settable filler material while the material sets comprising: a tubular wall formed of a flexible woven polymer fabric having a first annular end edge at a first end and a second annular end edge at a second end; at least one filler opening into the form for receiving the filler material; wherein the tubular wall is formed from a strip of the fabric which is arranged helically such that one side edge of the strip is stitched to an opposed side edge of a next turn of the strip to define a stitched seam which extends helically of the tubular wall from one end panel to the opposite end panel (see entire document including column 3, lines 16-54, column 6, lines 1-10, column 10, lines 14-26 and Figures 5, 6, 10 and 12).

Bradley discloses that the ends may be sewn (column 4, lines 20-25), but Bradley does not appear to mention forming the end panels as circular end panels stitched around the circular peripheral edge to a respective one of the first and second end edges of the tubular wall. Nattrass and Marino each discloses that it is known in the flexible bulk bag art to form end panels by stitching separate end panels around the peripheral edge to a respective one of the first and second end edges of the bag wall (see entire documents including column 4, lines 25-34 and column 5, lines 1-9 of Nattrass and column 3, lines 4-17 of Marino). Nattrass even discloses that

Art Unit: 1771

it is known in the flexible bulk bag art to use the disclosed end panels to replace, or in combination with, the end panel construction disclosed Bradley (see column 5, lines 1-9 of Nattrass). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the end panels from any suitable end panel construction, such as the disclosed end panels of Nattrass or Marino, with or without the end panel construction disclosed by Bradley, because the end panels would provide the bag with sufficient strength to carry bulk materials and because it is within the general skill of a worker in the art to select a known end panel construction on the basis of its suitability and desired characteristics such as strength.

Regarding the form being mounted with one end panel uppermost at a surface to be supported and with the opposite end panel resting on a floor surface, Bradley does not appear to mention support straps, but Cizek discloses that it is known in the art to add support straps for mounting the pillar as a support between an uppermost surface and a floor surface (see entire document including column 2, lines 35-44 and column 10, lines 20-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps, as taught by Cizek, so that an uppermost surface can be supported by the pillar with the opposite end panel resting on a floor surface.

Regarding the form containing a heated settable filler material which is set, Bradley discloses that the column may contain soil or other fill material (column 1, lines 7-25). Soil is considered a settable filler material because it can be put in a specified position. Although Bradley does not specifically mention heating the filler material before letting it set, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article.

Art Unit: 1771

Regarding claim 3, Bradley discloses that the fabric strip may extend in at least one turn of helix (Figure 6).

Regarding claims 4 and 7, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 5, the strip of Bradley appears to lie at an angle of the order of 45 degrees relative to a line transverse to the longitudinal to the axis of the tubular member (see Figures 5-7, 10, 12 and/or 15).

Regarding claims 6 and 7, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Regarding claim 8, Bradley discloses that the tubular wall and end panels may each consist of a single layer of fabric (column 3, lines 42-54).

Art Unit: 1771

Regarding claim 9, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

Regarding claim 10, Bradley discloses that the tubular wall and the end panels may be stitched together with simple overlapping seams (column 3, lines 28-33).

Regarding claim 11, Bradley discloses that the flexible fabric may be polypropylene woven fabric (column 6, lines 1-11).

Regarding claim 12, Bradley discloses that the flexible woven fabric may be substantially imperforate (column 3, lines 20-22).

6. Claims 2, 14, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of USPN 5,232,429 to Cizek in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino as applied to claims 1 and 3-12 above, and further in view of any one USPN 6,171,533 to Adams or USPN 6,139,482 to Lafleur.

Regarding claims 2, 14, 16-17 and 19, Bradley discloses that the fabric may be a single layer of fabric, which may have an inner liner (column 3, lines 42-62 and column 10, lines 43-56), but Bradley does not appear to specifically mention a metal foil layer in combination with the woven polymer layer. Adams and Lafleur each discloses that it is known in the bulk bag art to use a metal foil layer in combination with a woven polymer layer to form a liquid tight barrier (see column 2, lines 28-37 and column 5, lines 8-13 of Adams and column 1, lines 10-40 of Lafleur). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wall and end panels from any suitable material, such as a woven polymer fabric laminated with a metal foil, because the bag would not be susceptible to water

Art Unit: 1771

damage and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 16, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 17, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Regarding claim 19, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

7. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino in view of any one of USPN 5,472,297 to Heselden or USPN 5,489,165 to Smith.

Regarding claims 1 and 3-12, Bradley discloses a support column comprising a form for

Art Unit: 1771

receiving and containing a settable filler material while the material sets comprising: a tubular wall formed of a flexible woven polymer fabric having a first annular end edge at a first end and a second annular end edge at a second end; at least one filler opening into the form for receiving the filler material; wherein the tubular wall is formed from a strip of the fabric which is arranged helically such that one side edge of the strip is stitched to an opposed side edge of a next turn of the strip to define a stitched seam which extends helically of the tubular wall from one end panel to the opposite end panel (see entire document including column 3, lines 16-54, column 6, lines 1-10, column 10, lines 14-26 and Figures 5, 6, 10 and 12).

Bradley discloses that the ends may be sewn (column 4, lines 20-25), but Bradley does not appear to mention forming the end panels as circular end panels stitched around the circular peripheral edge to a respective one of the first and second end edges of the tubular wall. Natrass and Marino each discloses that it is known in the flexible bulk bag art to form end panels by stitching separate end panels around the peripheral edge to a respective one of the first and second end edges of the bag wall (see entire documents including column 4, lines 25-34 and column 5, lines 1-9 of Natrass and column 3, lines 4-17 of Marino). Natrass even discloses that it is known in the flexible bulk bag art to use the disclosed end panels to replace, or in combination with, the end panel construction disclosed Bradley (see column 5, lines 1-9 of Natrass). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the end panels from any suitable end panel construction, such as the disclosed end panels of Natrass or Marino, with or without the end panel construction disclosed by Bradley, because the end panels would provide the bag with sufficient strength to carry bulk

Art Unit: 1771

materials and because it is within the general skill of a worker in the art to select a known end panel construction on the basis of its suitability and desired characteristics such as strength.

Regarding the form being mounted with one end panel uppermost at a surface to be supported and with the opposite end panel resting on a floor surface, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

It is noted that the recitation of intended use (column located between an uppermost surface and a floor surface) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Considering that the applied prior art teaches a support column with straps capable of allowing the form to be mounted with one end panel uppermost at a surface to be supported while the opposite end panel resting on a floor surface, the applied prior art teaches the claimed structural limitations.

Regarding the form containing a heated settable filler material which is set, Bradley discloses that the column may contain soil or other fill material (column 1, lines 7-25). Soil is considered a settable filler material because it can be put in a specified position. In the event that

Art Unit: 1771

it is shown that soil is not a “settable filler material” Heselden and Smith each disclose that it is known in the art to use soil or cement as a filler material (see column 1, lines 21-56 of Heselden and column 7, lines 8-30 of Smith). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the filler material from any suitable filler material, such as soil or cement, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claim 3, Bradley discloses that the fabric strip may extend in at least one turn of helix (Figure 6).

Regarding claims 4 and 7, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 5, the strip of Bradley appears to lie at an angle of the order of 45 degrees relative to a line transverse to the longitudinal to the axis of the tubular member (see Figures 5-7, 10, 12 and/or 15).

Regarding claims 6 and 7, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and

Art Unit: 1771

column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Regarding claim 8, Bradley discloses that the tubular wall and end panels may each consist of a single layer of fabric (column 3, lines 42-54).

Regarding claim 9, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

Regarding claim 10, Bradley discloses that the tubular wall and the end panels may be stitched together with simple overlapping seams (column 3, lines 28-33).

Regarding claim 11, Bradley discloses that the flexible fabric may be polypropylene woven fabric (column 6, lines 1-11).

Regarding claim 12, Bradley discloses that the flexible woven fabric may be substantially imperforate (column 3, lines 20-22).

8. Claims 2, 14, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino in view of any one of USPN 5,472,297 to Heselden or USPN 5,489,165 to Smith as applied to claims 1 and 3-12 above, and further in view of any one USPN 6,171,533 to Adams or USPN 6,139,482 to Lafleur.

Regarding claims 2, 14, 16-17 and 19, Bradley discloses that the fabric may be a single layer of fabric, which may have an inner liner (column 3, lines 42-62 and column 10, lines 43-

Art Unit: 1771

56), but Bradley does not appear to specifically mention a metal foil layer in combination with the woven polymer layer. Adams and Lafleur each discloses that it is known in the bulk bag art to use a metal foil layer in combination with a woven polymer layer to form a liquid tight barrier (see column 2, lines 28-37 and column 5, lines 8-13 of Adams and column 1, lines 10-40 of Lafleur). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wall and end panels from any suitable material, such as a woven polymer fabric laminated with a metal foil, because the bag would not be susceptible to water damage and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 16, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Nattrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Nattrass and Figure 1 of Marino).

Regarding claim 17, Bradley does not appear to mention support straps, but Nattrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Nattrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Art Unit: 1771

Regarding claim 19, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

9. Claims 1 and 3-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of USPN 5,232,429 to Cizek in view of any one of USPN 4,610,028 to Nattrass or USPN 4,874,258 to Marino in view of any one of USPN 5,472,297 to Heselden or USPN 5,489,165 to Smith.

Regarding claims 1 and 3-12, Bradley discloses a support column comprising a form for receiving and containing a settable filler material while the material sets comprising: a tubular wall formed of a flexible woven polymer fabric having a first annular end edge at a first end and a second annular end edge at a second end; at least one filler opening into the form for receiving the filler material; wherein the tubular wall is formed from a strip of the fabric which is arranged helically such that one side edge of the strip is stitched to an opposed side edge of a next turn of the strip to define a stitched seam which extends helically of the tubular wall from one end panel to the opposite end panel (see entire document including column 3, lines 16-54, column 6, lines 1-10, column 10, lines 14-26 and Figures 5, 6, 10 and 12).

Bradley discloses that the ends may be sewn (column 4, lines 20-25), but Bradley does not appear to mention forming the end panels as circular end panels stitched around the circular peripheral edge to a respective one of the first and second end edges of the tubular wall. Nattrass and Marino each discloses that it is known in the flexible bulk bag art to form end panels by stitching separate end panels around the peripheral edge to a respective one of the first and second end edges of the bag wall (see entire documents including column 4, lines 25-34 and

Art Unit: 1771

column 5, lines 1-9 of Natrass and column 3, lines 4-17 of Marino). Natrass even discloses that it is known in the flexible bulk bag art to use the disclosed end panels to replace, or in combination with, the end panel construction disclosed Bradley (see column 5, lines 1-9 of Natrass). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the end panels from any suitable end panel construction, such as the disclosed end panels of Natrass or Marino, with or without the end panel construction disclosed by Bradley, because the end panels would provide the bag with sufficient strength to carry bulk materials and because it is within the general skill of a worker in the art to select a known end panel construction on the basis of its suitability and desired characteristics such as strength.

Regarding the form being mounted with one end panel uppermost at a surface to be supported and with the opposite end panel resting on a floor surface, Bradley does not appear to mention support straps, but Cizek discloses that it is known in the art to add support straps for mounting the pillar as a support between an uppermost surface and a floor surface (see entire document including column 2, lines 35-44 and column 10, lines 20-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps, as taught by Cizek, so that an uppermost surface can be supported by the pillar with the opposite end panel resting on a floor surface.

Regarding the form containing a heated settable filler material which is set, Bradley discloses that the column may contain soil or other fill material (column 1, lines 7-25). Soil is considered a settable filler material because it can be put in a specified position. In the event that it is shown that soil is not a "settable filler material" Heselden and Smith each disclose that it is known in the art to use soil or cement as a filler material (see column 1, lines 21-56 of Heselden

Art Unit: 1771

and column 7, lines 8-30 of Smith). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the filler material from any suitable filler material, such as soil or cement, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Regarding claim 3, Bradley discloses that the fabric strip may extend in at least one turn of helix (Figure 6).

Regarding claims 4 and 7, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Natrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Natrass and Figure 1 of Marino).

Regarding claim 5, the strip of Bradley appears to lie at an angle of the order of 45 degrees relative to a line transverse to the longitudinal to the axis of the tubular member (see Figures 5-7, 10, 12 and/or 15).

Regarding claims 6 and 7, Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the

Art Unit: 1771

support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Regarding claim 8, Bradley discloses that the tubular wall and end panels may each consist of a single layer of fabric (column 3, lines 42-54).

Regarding claim 9, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

Regarding claim 10, Bradley discloses that the tubular wall and the end panels may be stitched together with simple overlapping seams (column 3, lines 28-33).

Regarding claim 11, Bradley discloses that the flexible fabric may be polypropylene woven fabric (column 6, lines 1-11).

Regarding claim 12, Bradley discloses that the flexible woven fabric may be substantially imperforate (column 3, lines 20-22).

10. Claims 2, 14, 16-17 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,902,070 to Bradley in view of USPN 5,232,429 to Cizek in view of any one of USPN 4,610,028 to Natrass or USPN 4,874,258 to Marino in view of any one of USPN 5,472,297 to Heselden or USPN 5,489,165 to Smith as applied to claims 1 and 3-12 above, and further in view of any one USPN 6,171,533 to Adams or USPN 6,139,482 to Lafleur.

Regarding claims 2, 14, 16-17 and 19, Bradley discloses that the fabric may be a single layer of fabric, which may have an inner liner (column 3, lines 42-62 and column 10, lines 43-56), but Bradley does not appear to specifically mention a metal foil layer in combination with the woven polymer layer. Adams and Lafleur each discloses that it is known in the bulk bag art

Art Unit: 1771

to use a metal foil layer in combination with a woven polymer layer to form a liquid tight barrier (see column 2, lines 28-37 and column 5, lines 8-13 of Adams and column 1, lines 10-40 of Lafleur). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the wall and end panels from any suitable material, such as a woven polymer fabric laminated with a metal foil, because the bag would not be susceptible to water damage and because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability.

Regarding claim 16, Bradley discloses that a filler opening(s) may be provided based on the intended application (column 9, lines 5-12). Bradley illustrates a filler opening in an end panel (Figures 11A, 11B, 11C and 12) and filler openings in the tubular wall (Figures 10, 11A, 11B and 11C). In addition, Nattrass and Marino each discloses that it is known in the flexible bulk bag art to put opening in the end panels (see Figure 4 of Nattrass and Figure 1 of Marino).

Regarding claim 17, Bradley does not appear to mention support straps, but Nattrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Nattrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

Art Unit: 1771

Regarding claim 19, Bradley discloses that the tubular wall and the end panels may be stitched together with stitched seams on the outside of the form (column 12, lines 7-29 and Figures 6 and 7).

Response to Arguments

11. Applicant's arguments filed 5/18/2006 have been fully considered but they are not persuasive.

The applicant asserts that the applied prior art does not teach or suggest the form being mounted with one end panel uppermost at a surface to be supported and with the opposite end panel resting on a floor surface. The examiner respectfully disagrees. Bradley does not appear to mention support straps, but Natrass and Marino each discloses that it is known in the flexible bulk bag art to add support straps adjacent one end panel for handling purposes and/or for securing/fastening of the form during installation and/or use (see entire documents including Figures 2 and 3 of Natrass and column 3, lines 17-28 of Marino). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps adjacent one end panel, because the support straps can be used for improved handling and/or for securing/fastening of the form during installation and/or use.

It is noted that the recitation of intended use (column located between an uppermost surface and a floor surface) of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. Considering that the applied prior art teaches a support column with straps capable of allowing the form to be mounted with one end panel uppermost at a surface to

Art Unit: 1771

be supported while the opposite end panel resting on a floor surface, the applied prior art teaches the claimed structural limitations.

In addition, Cizek discloses that it is known in the art to add support straps for mounting the pillar as a support between an uppermost surface and a floor surface (see entire document including column 2, lines 35-44 and column 10, lines 20-34). It would have been obvious to one having ordinary skill in the art at the time the invention was made to add support straps, as taught by Cizek, so that an uppermost surface can be supported by the pillar with the opposite end panel resting on a floor surface.

The applicant asserts that the applied prior art fails to teach or suggest the form containing a heated settable filler material which is set. The examiner respectfully disagrees. Bradley discloses that the column may contain soil or other fill material (column 1, lines 7-25). Soil is considered a settable filler material because it can be put in a specified position. Although Bradley does not specifically mention heating the filler material before letting it set, it is the examiner's position that the article of the applied prior art is identical to or only slightly different than the claimed article. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself.

In addition, Heselden and Smith each disclose that it is known in the art to use soil or cement as a filler material (see column 1, lines 21-56 of Heselden and column 7, lines 8-30 of Smith). It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the filler material from any suitable filler material, such as soil or cement, because it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability and desired characteristics.

Art Unit: 1771

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T. Piziali whose telephone number is (571) 272-1541. The examiner can normally be reached on Monday-Friday (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

970 7/1/06

**ANDREW T. PIZIALI
PATENT EXAMINER**

atp